

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 3-5, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glinz (US 6,463,976, of record) and further in view of Conger (US 4,036,765, of record), French (US 3,913,654, of record), and Watanabe (JP 2-227304, newly cited).

As best depicted in Figures 1-4, Glinz teaches a runflat tire construction comprising a runflat insert defined by a pair of rings and an annular shell. It is further evident from the figures that said annular shell comprises two apexes. The reference, however, is silent with respect to the inclusion of a retention groove on an inner peripheral surface of said tire.

Conger, on the other hand, is broadly directed to runflat tire constructions and teaches the inclusion of a lubricant layer on an inner peripheral surface of the tire in order to eliminate heat buildup commonly experienced in an underinflated condition (when runflat support member contacts tire inner surface). One of ordinary skill in the art at the time of the invention would have found it obvious to include such a lubricant layer in the runflat tire of Glinz for the aforementioned benefits. Additionally, while Conger fails to arrange such a lubricant layer within a retention groove, French recognizes the known use of such retention grooves with lubricant layers. In essence, French recognizes an alternative manner in which lubricant layers are commonly

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provided on a tire inner surface and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed arrangement. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to use retention grooves in the wheel assembly of Glinz in view of Conger.

Also, regarding independent claim 1, modern tires are conventionally described as including an inner liner and at least one carcass ply. One example of such a conventional tire construction is shown by Watanabe. Furthermore, in view of Watanabe, one would have found it obvious to form the innerliner as a first innermost rubber layer (claimed innerliner) and a second outermost rubber layer adjacent the carcass (claimed reinforcement rubber layer). It is particularly noted that Watanabe specifically teaches that such a two layer structure provides improved water resistance/corrosion resistance and improved adhesive properties and thus, one would have been amply motivated to form the innerliner of Glinz with an innermost rubber layer (claimed innerliner) and an outermost rubber layer (claimed reinforcement rubber layer).

Lastly, regarding claim 1 (and dependent claim 3), Figures 1-7 of French suggest that the reference is directed to a plurality of embodiments in which the retention grooves have a wide variety of dimensions (depth and width). It is further noted that the claims require absolute dimensions and it is well recognized that tire dimensions are directly related to the type of tire (and thus the tire size- tire components are generally larger in larger tires). Thus, one of ordinary skill in the art at the time of the invention

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would have found it obvious to form the retention grooves of French in accordance to the claimed invention absent any conclusive showing of unexpected results.

With respect to claims 4 and 5, as noted above, conventional tire assemblies include at least one carcass ply. In the instance where two carcass plies are provided, an innermost carcass ply can be viewed as a fiber reinforced layer that is sandwiched between a bottom of the retention groove and an outermost carcass ("a carcass ply" as defined by the claimed invention). Furthermore, such carcass plies are formed with either a biased or radial construction (satisfies claimed range between 45 and 90 degrees with respect to the circumferential direction of the tire). It is emphasized that the claims as currently drafted fail to exclude an innermost carcass ply from being viewed as the claimed fiber reinforced layer.

As to claim 7, the retention grooves of French can be discontinuous in the circumferential direction of the tire (e.g. Figure 7 and Column 3).

Regarding claims 8 and 9, ribs 7 are seen to constitute the claimed "salient portions" that extend in the circumferential direction of the tire (Figure 3 and Column 2, Lines 55+).

Response to Arguments

3. Applicant's arguments with respect to claims 1-3, 5-7, and 9 have been considered but are moot in view of the new ground(s) of rejection.

Furthermore, applicant contends that since the fluid of Conger does not generally flow at normal operating temperatures of the tire, Conger is not concerned with maintaining the lubricant in a specific position within the pneumatic tire. The examiner

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respectfully disagrees. In particular, Conger specifically teaches a lubricant composition designed to “remain in position in the tire even under centrifugal force until the tire becomes flat” (Column 1, Lines 39+). Thus, the inclusion of grooves in view of French is consistent with the general desire of Conger to include a lubricant that remains in a desired arrangement or location.

Applicant further argues that French is concerned with regions of the interior surface of the tire which come into contact with other regions of the interior surface of the tire in a run-flat condition and that are radially outward at a rim flange. As detailed above, Glintz in view of Conger teaches a tire including a runflat assembly (shell and rings) and a lubricant disposed on the inner peripheral tire surface above said assembly. More particularly, Conger suggests the use of a specific lubricant composition designed to remain in a certain location or arrangement until a runflat condition. French further teaches a method of including retention grooves or recesses in order to arrange a lubricant in a desired location or arrangement. One would have readily appreciated using the combination of techniques (lubricant of Conger and grooves of French) as each obtains the same benefit of maintaining the lubricant in a specific location (combination would be expected to optimize such a desired benefit).

Lastly, applicant contends that Paragraphs 28 and 29 establish a conclusive showing of unexpected results for the claimed groove dimensions. However, the above noted paragraphs are directed to purported benefits without any conclusive showing of unexpected results (i.e. comparison with grooves having dimensions outside of claimed range). Also, Figures 2-7 appears to suggest the general use of grooves or recesses

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without limitation in regards to the groove depth, it being noted that the embodiment in Figure 3 appears to have a significantly greater depth as compared to the embodiment in Figure 6 (suggests wide range of groove dimensions).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

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March 26, 2010